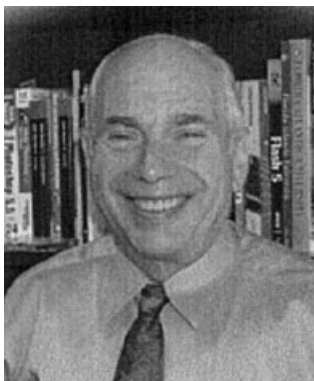


In Memoriam

Herbert S. Rosenkranz (September 27, 1933–November 27, 2004)

A Fond Remembrance



Herbert S. Rosenkranz

Herb Rosenkranz, a good friend, a colleague, and a very nice human being, died this past November 27 of pancreatic cancer at the age of 71, while still in the midst of a very productive career. In addition to being a fount of knowledge and having a high level of energy to contribute to his teaching and to his many scientific interests, he had an extremely pleasant personality.

Herb was born in Vienna, Austria, in 1933. After the Nazi *anschluss* in 1938, and his father's subsequent arrest and release from custody, he and his parents fled Vienna for France, where they traveled around looking for safety. They eventually settled in Lyon and, on October 15, 1941, the family barely escaped capture because they were out looking for food when the synagogue that was being used as a meeting place for refugees was raided and all the people there were arrested and sent to concentration camps. Because of that close call, Herb remembered that day, and would say that he considered every day after that as a gift. The family then traveled to Belgium, back through France, and then to Switzerland, where they were allowed into the country only because they had a child, Herb, with them (at that time, refugee single individuals and couples without children were not allowed to enter the country). As a result of those travels, Herb became fluent in French, in addition to his native German. The family lived in Geneva until they emigrated to the United States in 1948, settling in New York City.

Herb earned his undergraduate degree in chemistry at the City College of New York in 1954 and a PhD in bio-

chemistry in 1959 from Cornell University/Sloan-Kettering Institute for Cancer Research in New York City; his dissertation research was on the fractionation and reactions of DNA. He held postdoctoral appointments at Sloan-Kettering and at the University of Pennsylvania before joining the Department of Microbiology at Columbia University in 1961 as an Assistant Professor. He was appointed Professor and Chairman in 1969. From 1971 to 1972 he was a Visiting Professor at the Hebrew University in Israel, where he also became fluent in Hebrew. In 1981, he moved to Case Western Reserve University (CWRU) in Cleveland when he was appointed Mary Ann Swetland Professor and Chairman, Department of Environmental Health Sciences, and Professor of Biochemistry, Pediatrics, Oncology, and Radiology. In 1990, he moved to the University of Pittsburgh as Chairman of the Department of Environmental and Occupational Health, Graduate School of Public Health, and served as Interim Dean of the Graduate School of Public Health from 1998 to 2001. He became Emeritus Professor in 2003, and "retired" to Florida with an appointment as Research Professor of Biomedical Sciences, Florida Atlantic University, in Boca Raton, where he continued his research and manuscript writing and, if his illness hadn't intervened, was preparing to teach classes.

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In 1993, CWRU established the Herbert S. Rosenkranz Annual Award for Excellence in the Environmental Health Sciences, and in 2002, the University of Pittsburgh School of Public Health established the Herbert S. Rosenkranz Award to recognize student excellence in research. During his illustrious career, Herb received many honors and awards, was on numerous national and international committees, advisory boards, and panels, and published nearly 500 articles.

I first met Herb in 1973, two years after he had introduced the *E. coli* polA (DNA damage/repair) test for identifying genotoxic chemicals. I was part of an NCI pre-award site-visit team visiting his laboratory at Columbia University College of Physicians and Surgeons for a contract to evaluate the efficacy of the, then new, Salmonella test, and other bacterial and yeast tests, including polA. He organized a very impressive site visit, and made an interesting impression on the team when, instead of rolling out an impressive lunch in the conference room as was usually done for visitors with money to spend, he announced at lunchtime that he had a lecture to attend, but if we left the building and turned left, we would come to a very good deli where we could get a good lunch, and that we'd meet again in a couple of hours. He was right about the lunch. He was also awarded one of the contracts.

We became personal friends during the course of this contract, and my family and I were often invited to visit him at his home in New Jersey whenever we were in the New York area. It was during our first visit that we discovered that his wife, Deanna, and I had grown up near each other in the Bronx, and had been classmates in the 7th and 8th grades.

Herb had the experience and pleasure of publishing a number of articles with his father (who worked at Columbia as an engineer, and in Herb's laboratory to help maintain and run the equipment) over a 10-year period, and with his eldest daughter and his eldest son, both of whom worked during summers as undergraduate or postgraduate laboratory assistants either in his laboratory or with his long-term colleague, William Speck. He never published with more than one family member at a time, and I remember commenting that he missed the opportunity of publishing a paper by Rosenkranz, Rosenkranz, Rosenkranz, and Rosenkranz.

Throughout his research career, he stayed interested in DNA, either as a chemical whose reactivity was to be studied, or as a target for genotoxic substances. In addition to developing the polA test, he conducted pioneering work involving the identification of hydroxyurea as an inhibitor of DNA synthesis and the identification of nitroarenes as environmental and workplace mutagens, and he was an enthusiastic promoter of the use of computer algorithms to identify biological activity through chemical structure. In the past few years, most of his research centered around quantitative structure–activity relationships (QSAR), using the CASE system, which he co-developed with Gilles Klopman while at CWRU in the early-to-mid 1980s for computerized prediction of mutagenicity and carcinogenicity. The system was later broadened to include other toxicological effects. Herb was also an enthusiastic proponent of the use of Bayesian statistics to develop algorithms for predicting chemical toxicity and for measuring the effectiveness of individual test methods and test batteries. During the past 15–20 years, Herb's interests and publications shifted away from the reporting of the results of laboratory experiments to computational modeling studies.

Herb was a member of a number of scientific societies, including the EMS, which he joined in 1969, its first year of existence. He served as an EMS Councilor from 1978 to 1981, was on the *Environmental and Molecular Mutagenesis* Editorial Board from 1982 to 1993, and won the Society's Alexander Hollaender Award in 1989. He also organized the Fifth International Conference on Environmental Mutagens in Cleveland in 1989.

During all the time I knew him, Herb was always soft-spoken and gracious, and never failed to have an upbeat, cheerful greeting. I knew him to lose his temper only once. It was during a telephone conversation when he was recounting what can best be described as a snafu at an overseas conference at which he was a guest speaker, and his interactions with a particularly rude person who was the prime creator of that snafu. His anger was evident only by what he said, not in how he said it.

Herb was a devoted husband and family man. He is survived by his wife, Deanna, whom he married in 1959, eight children, and an increasing number of grandchildren.

Errol Zeiger